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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,049	06/20/2003	Thomas N. Chalin	WCMI-0035	6461

20558 7590 07/25/2005
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EXAMINER

BELLINGER, JASON R

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/600,049	Applicant(s) CHALIN ET AL.	
	Examiner Jason R. Bellinger	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-42 and 44-52 is/are pending in the application.
- 4a) Of the above claim(s) 5-12, 22-29, 37, 40-42 and 45-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 13-21, 30-36, 38, 39 and 44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/10/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 10 March 2005 was filed after the mailing date of the non-final office action on 27 January 2005. The Examiner has considered the information disclosure statement, however the Aton reference was previously cited by the Examiner, and has therefore no need to be considered.

Claim Objections

2. Claims 40 and 45-52 are objected to because of the following informalities: The claims have an incorrect status identifier. The claims lack an indication that they have previously been withdrawn from consideration due to the response filed 20 December 2004 to an election/restriction requirement. Therefore, claims 45-52 are still withdrawn from consideration, regardless of being amended.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over VanDenberg in view of Gimlett et al. VanDenberg shows the use of an axle 19 attached to a suspension system. Namely, at least two beams 15 are attached to the axle 19 for

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pivoting displacement of the axle 19 relative to a vehicle frame 2. The axle 19 extends between and through each of the beams 15.

VanDenberg does not show at least a portion of the axle being made of a composite material. Gimlett et al teaches the use of an axle 2, at least a portion of which is made from a composite material 3. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form at least a portion of the axle of VanDenberg from a composite material for the purpose of increasing the strength and stress resistance of the axle.

5. Claims 13-21, 30-36, 38, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over VanDenberg in view of Gimlett et al as applied to claims 2-4 above, and further in view of Aton. VanDenberg as modified by Gimlett et al does not show at least two metal sleeves secured to the axle.

Aton teaches the use of an axle assembly including an axle 2 and a spindle 1 attached to the axle 2. The spindle 1 is attached to a sleeve 12 that at least partially overlies the axle 2. An axle portion 5 is received within an interior 4 of the spindle 1. While not shown, the axle 2 of Aton would include at least two metal sleeves 12 secured exteriorly about the axle 2. Aton would also include two spindles 1 attached to the respective sleeves 12. The axle 2 extends through the sleeves 12 (namely, axle portion 5 extends through the sleeves 12). An axle portion 5 is received within an interior 4 of the spindle 1.

While not shown, the spindle 1 could be welded to the sleeve 12, in order to reduce the number of parts required to form the axle assembly.

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the composite axle of VanDenberg as modified by Gimlett et al with the physical features (i.e. sleeve, spindle, etc.) of Aton in order to allow a plurality of different types and sizes of wheels to be used on the vehicle, while allowing replacement of the spindles in the event of damage to the spindles.

The sleeves 12 of Aton could be attached to a respective one of the beams 15 as shown in VanDenberg. As shown in VanDenberg, the portion of each beam end 18 that surrounds the axle 19 acts as a pair of axle seats. These axle seats would be interconnected between the sleeves 12 of Aton and the beams 15 of VanDenberg. Furthermore, the sleeves 12 of Aton would be bonded to the axle composite portion (such as in the manner set forth in column 5, line 61 through column 6, line 3 of VanDenberg) in order to prevent axial movement of the sleeves and/or axle during operation of the vehicle. The sleeves 12 of Aton could also be "welded" to the beams 15 of Vandenberg, by heat fusing the composite material of the beams 15 to the sleeve 12 of Aton, as an alternative to adhesively bonding the two elements together, dependent upon cost and the exact type of connection required.

When given the configuration of Aton, the composite axle 2 (Of Gimlett et al) would include a portion (5 as shown in Aton) that extends into each spindle 1. While not shown, one of ordinary skill in the art would find it obvious to bond the spindle 1 to the composite axle 2 (of Gimlett et al) in order to reduce the amount of relative rotation

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between the axle and spindle during operation, thus preventing failure of the assembly and increasing safety considerations.

6. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over VanDenberg in view of Gimlett et al and Aton as applied to claims 13-21, 30-36, 38, 40, 44 above, and further in view of Bradley. VanDenberg as modified by Gimlett et al and Aton does not show the spindle including a brake mounting attached thereto.

Bradley teaches the use of a spindle 12 that includes a brake mounting 38 attached thereto. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a brake mounting on the spindles of VanDenberg as modified by Gimlett et al and Aton for the purpose of allowing a brake element and/or wheel to be mounted onto the spindle, as is well known in the art, thus providing a means to retard the rotation of a wheel mounted on the spindle.

Response to Arguments

7. Applicant's arguments with respect to claims 2-4, 13-21, 30-36, 38-39, and 44 have been considered but are moot in view of the new ground(s) of rejection.

8. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

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hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references are considered to show axles having composite portions. For example, Takai et al shows an axle having a composite portion.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 703-308-6298. The examiner can normally be reached on Mon - Thurs (9:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger
Examiner
Art Unit 3617


jrb
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